

PULSE-BY-PULSE CAVITY RING-DOWN SPECTROSCOPY

ABSTRACT OF THE DISCLOSURE

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A cavity ring-down spectroscopy system and method is provided for detecting and resolving the ring-down pulse-by-pulse. The pulse-by-pulse cavity ring-down spectroscopy system enables for measuring absorption spectra of rapidly evolving systems on the order of the roundtrip time. The pulse-by-pulse analysis of ring-down profiles enables non-exponential ring-down absorption dynamics to be determined.